

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
18 December 2003 (18.12.2003)

PCT

(10) International Publication Number  
WO 03/105384 A1(51) International Patent Classification<sup>7</sup>: H04J 14/02, H04B 10/18

(21) International Application Number: PCT/GB03/02508

(22) International Filing Date: 11 June 2003 (11.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 0213385.8 11 June 2002 (11.06.2002) GB

(71) Applicant (for all designated States except US): MARCONI UK INTELLECTUAL PROPERTY LTD [GB/GB]; New Century Park, P.O. Box 53, Coventry CV3 1HJ (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): CLARINGBURN, Harry, Richard [GB/GB]; 49 Fernleigh Avenue, westdale Lane, Nottingham NG3 6FN (GB).

(74) Agent: WATERS, Jeffrey; Marconi Intellectual Property, Marrible House, Vineyards, Great Baddow, Chelmsford, Essex CM2 7QS (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

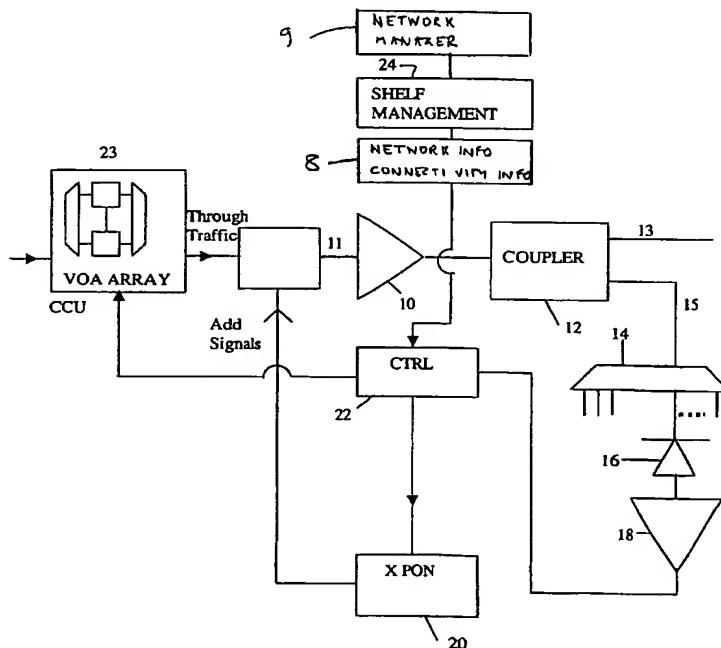
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MAXIMISING POWER IN OPTICAL COMMUNICATION NETWORKS



WO 03/105384 A1

(57) Abstract: The relative launch power of signals at an add/drop node transponder is controlled to maximise available power. Known values of signal bandwidth and likely noise in the signal path (8), for example, derived from the system manager (24,9), are used to control (22) the launch power (23) into the optical amplifier (11), in order to optimise the launch power accordingly.